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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,248	04/11/2005	Hideharu Itatani	122430	9181
25944 OLIFF & BERI	7590 03/24/200 RIDGE, PLC	EXAMINER		
P.O. BOX 3208	350	EVERHART, CARIDAD		
ALEXANDRIA, VA 22320-4850			ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

This action is FINAL. 2b		Application No.	Applicant(s)				
Candad M. Everhart Candad	Office Action Summers	10/521,248	ITATANI ET AL.				
- The MALING DATE of this communication appears on the cover sheet with the correspondence address — Period for Repty A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MALINING DATE OF THIS COMMUNICATION. Featmaster of time may be acadised used the provisions of 3°CFR 1.18(a), in a worst, however, may negly be timely liked. If IND period for regly is operated above, the mensimum situations yearder will apply and will exply a SM will be set or extension of the correct will apply and will exply a SM MON HIS from the mailing date of this communication. Feature to regive is operated above, the mensimum situations yearder will apply and will exply a SM MON HIS from the mailing of the of this communication. Feature to regive within the set or exercised yearder for year. Feature to regive within the set or exercised yearder for year. Feature to regive within the set or exercised year of the provision of the communication. Feature to regive within the set or exercised year of the communication, even if armaly fixed, may reduce any carried year of the communication. Figure 1 in the set of this communication. Figure 2 in the set of this communication. Figure 3 in the set of this communication. Figure 3 in the set of this communication. Figure 4 in the set of this communication. Figure 4 in the set of this communication. Figure 4 in the set of this communication. Figure 5 in the set of this communication. Figure 5 in the set of this communication. Figure 6 in the set of this communication. Figure 6 in the set of this communication. Figure 7 in the set of this communication. Figure 7 in the set of this communication. Figure 7 in the set of this communication. Figure 8 in the set of this communication. Figure 9 in the set of this communication. Figure 9 in th	Office Action Summary	Examiner	Art Unit				
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Art Unit: 2891

Applicant's arguments filed 12-26-2007 have been fully considered but they are not persuasive with respect to claim 20. Claim 20 is an apparatus claim and is therefore rejected with respect to the apparatus limitations, which are taught by the prior art of record as applied in the rejections of the prior office action. It was pointed out in the rejection that the steps and the apparatus for carrying out the steps as discussed in the rejection were taught by the prior art of record. For example, Chun teaches a process chamber and a heater in the sustrate pedestal for the sustrate and chambers for remotely exciting the gases as well as a manifold which Fig. 2 shows has entrance pipes for the separate gases(Fig. 1, Fig. 2, and paragraph 0026). In addition, as pointed out in the rejection, Chun further teaches a controller, and other apparatus for carrying out the process as pointed out in the rejection.

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-11,13,15-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Chung et al (US 2004/0018304A1).

Chung et al disclose and apparatus and the process of disposing a substrate within a chamber, the substrate being a semiconductor wafer which may be silicon(paragraph 0032), the gas is activated remotely from the chamber(paragraph 0035), the precursor is pulsed to the chamber(paragraph 0040). An activated reducing

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gas which is activated remotely from the chamber may be provided to the chamber(paragraph 0046 and 0047). The steps are repeated(paragraph 0049). The precursor and the reducing gas may be activated (paragraph 0050). A metal may be deposited(paragraph 0057) or a metal compound(paragraph 0057). The thickness of the layer is within the recited range and the film formed may be a TiN barrier layer(paragraph 0057). The reducing gas may be NH3(paragraph 0053). The precursor may be TDMAT, which satisfies the limitation of claim 13(paragraph 0052). The temperature is within the recited range(paragraph 0038). There is a microprocessor controller which regulates the reactor and the gas injection(paragraph 0020). Carrier gas alternates with the reactive gases(paragraph 0031). The process chamber includes a heated substrate pedestal(paragraph 0019). The gas may be supplied not activated and the activation may be within the chamber (paragraph 0026).

Allowable Subject Matter

Claims 16-19 are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Caridad M. Everhart whose telephone number is 571-272-1892. The examiner can normally be reached on Monday through Fridays 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, B. Baumeister can be reached on 571-272-1722. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Caridad Everhart/ Primary Examiner AU2891

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